SCIENTIFIC EDITORIAL

Sudden death expertise centre: A multi disciplinary approach for sudden death

Centre d’expertise mort subite (CEMS) : une approche multidisciplinaire de la mort subite

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Introduction

Cardiovascular mortality in France has decreased from 300,000 cases per year 40 years ago to 150,000 cases per year nowadays [1]. Cardiologists played a major role in this improvement, in terms of either acute coronary syndrome management or cardiovascular disease prevention. For instance, myocardial infarction mortality decreased from 30% to 7% during this period [2].
A few months ago, our Swedish colleagues published a paper of great interest to cardiologists [3]. They confirmed general trends suggesting that both incidence and mortality of acute coronary syndromes dramatically decreased over time (Fig. 1). However, they also emphasized that this global result hides great disparities regarding location of death occurrence. In analysing all deaths of coronary origin in Sweden between 1991 and 2006, they noted a decrease of 50% in in-hospital mortality while out-of-hospital mortality decreased by only 15%. In other words, nowadays, 80% of deaths of coronary origin occur outside the hospital. Sudden cardiac death is responsible for most of these cases and its relative proportion is currently increasing rapidly. Everyone would agree that improving in-hospital survival, even by a small percentage, will always be welcome but will become more challenging and will require an increasing number of important resources, either financial or human. Accordingly, it would appear crucial to develop a system that allows improvement in the management of out-of-hospital cardiac arrest and the prevention of such events.

Sudden cardiac death is a matter for emergency medicine, intensive care units, cardiology and arrhythmia management, but also for psychology, ethics, public health and medicoeconomics. This is why we advocated the creation of a sudden cardiac death expertise centre (Centre d’expertise mort subite [CEMS]) in order to gather all competencies related to sudden death in a transdisciplinary way. The CEMS started on 15 May 2011 at the European Georges Pompidou Hospital and was inaugurated on the 9 September 2011. The centre results from close collaboration between the National Institute of Health and Medical Research (Inserm), different Parisian Universities, the Assistance Publique des Hôpitaux de Paris, the Regional Agency of Health and the Agency of Biomedicine, with the partnership of all the Reference Centres that already exist for specific cardiac conditions throughout French territory [4]. The three axes of the development of this centre are patient care, education and research.

The main target is to implement, via an exhaustive recording system in Paris and its small ring, a medical and paramedical organization, in order to better understand and prevent sudden cardiac death. In practice, since 15 May 2011, every sudden death in Paris and its small ring is now registered online within hours of its occurrence, thanks to the close collaboration with the Brigade des sapeurs pompiers de Paris and the Service d’aide médicale urgente who manage it. On-line follow-up of survivors is then conducted, starting from their in-hospital management and a comprehensive study of subjects who died in the field is initiated. In addition, selected first-degree relatives are invited to participate in familial screening, using a step-by-step standardized workup, followed, if indicated, by a consultation in the Reference Centre for the pathology identified [4].

Figure 1. From Dudas et al. Circulation 2011. Mortality due to coronary heart disease in the hospital (within 28 days) and out of the hospital per 100,000 population 35 to 84 years of age, 1991 to 2006 in Sweden.
Other cities such as Nancy and Lille are on the way to opening their own Expertise Centres in partnership with the CEMS. Regular evaluations will be performed and every positive result will encourage others to follow suit; furthermore, such centres will offer an open platform for collaboration and discussion of data. We hope that this new approach will lead to an increase in survival rates after SCD to 10% over 10 years, a better understanding of mechanisms and risk factors, as well as many improvements in other related issues.

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.

References


